

BM-Advance Pro respirometer for the group of Urban Water Management of the University of Luxembourg



BM-Advance Pro Multipurpose Respirometry System

The Department of Engineering of the University of Luxembourg, and specifically the [group of Urban Water Management](#) led by [Prof. Joachim Hansen](#) has placed an order for the acquisition of a laboratory respirometry analyzer model [BM-Advance Pro](#) from Surcis S.L.



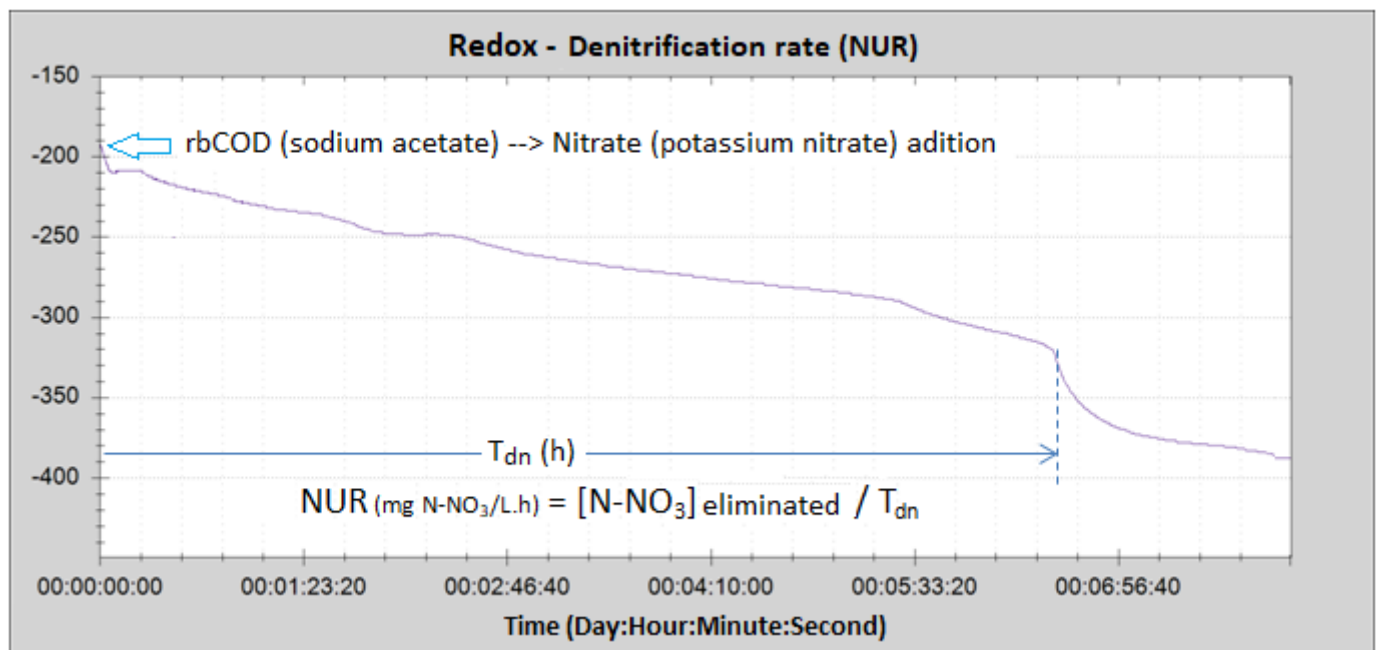
University of Luxembourg

This order has been carried out thanks to the international marketing plan that Surcis is developing and, in this case, thanks to the special intervention of [Dr. Irene Salmerón](#), featured researcher, author of several articles and already expert in BM Respirometry and [Dr. Silvia Venditti](#) leading researcher in Luxembourg specialized in micropollutant mitigation strategies. Likewise, the direct intervention of [INATECH](#), which is the distribution company of Surcis in the Belgium-Luxembourg area.

This BM-Advance Pro respirometer is acquired for research purposes of future projects related to optimization of treatment technologies and resources recovery from wastewater. For this, the BM-Advance Pro from Surcis has important software resources that allow it to address all applications with absolute flexibility to perform the tests under different conditions and, if the case requires it, change them during the respirometry test.

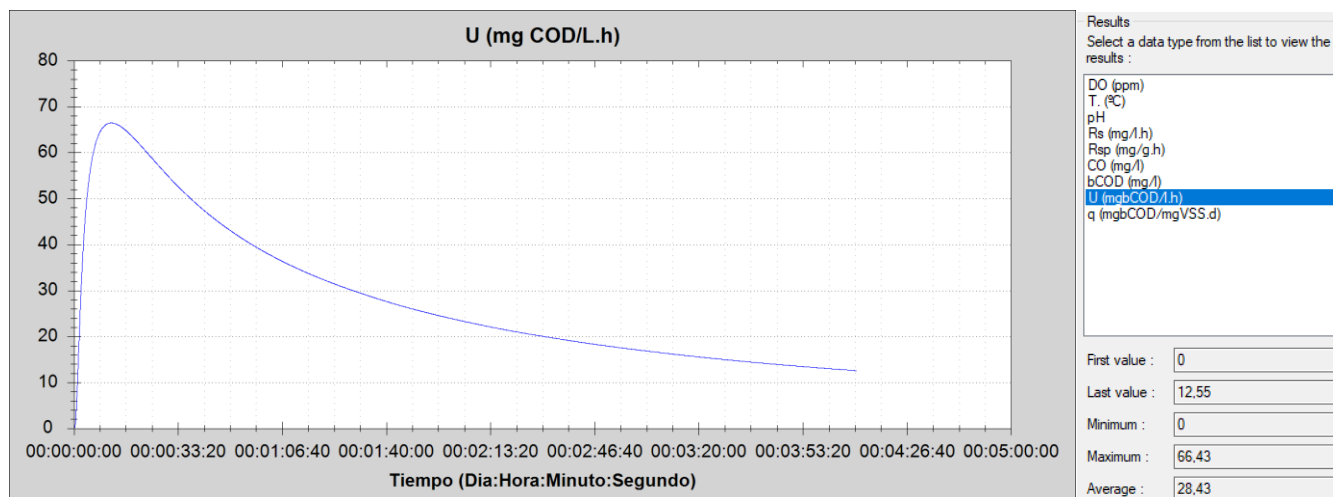
BM-Advance Pro is the only model in the Surcis BM respirometer series that includes Redox potential monitoring under the name ORP. This faculty allows him to address, in addition to the applications of aerobic respirometry, those related to anoxic and anaerobic processes.

One of the most important applications that can be carried out with ORP monitoring is that of an anoxic denitrification test with a certain known concentration of nitrate. On that way, we can calculate the denitrification rate (NUR) in the current conditions of rapidly biodegradable COD (COD) available, Oxygen, pH and Temperature; as well as carrying out studies in which other conditions are set in the software of the equipment to know their influence on this process.



ORP values Respirogram as Nitrate is being eliminated under anoxic conditions

Another important parameter that Surcis BM respirometers can carry out is the maximum and average rate of the elimination of biodegradable COD (U)



U respirogram throughout the bCOD removal

The analysis of the kinetic parameter U allows to address the calculations of the TRH that the process needs for the biodegradable COD (bCOD) removal and assess the F/M at different conditions of temperature, pH and biomass concentration.

This BM-Avance Pro will be included in an important list of [BM Respirometry Systems](#) that are already being used in a [significant number of different universities](#) around the world. And, with this, it is being demonstrated that BM respirometry is being positively valued for research groups on different municipal and industrial wastewater treatment processes.